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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/722,760	11/27/2000	Eduard Michel	1999DE132	4985

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CLARIANT CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
4000 MONROE ROAD
CHARLOTTE, NC 28205

EXAMINER

NOTE, JANIS L

ART UNIT	PAPER NUMBER
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1756

13

DATE MAILED: 07/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/722,760

Applicant(s)

MICHEL et al

Examiner

J. DOTE

Group Art Unit

1756

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☒ Responsive to communication(s) filed on 2/24/03; 4/25/03
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1, 4-22 is/are pending in the application.
- Of the above claim(s) 1, 4-18, 20, 21 is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 19, 22 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☒ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☒ All ☐ Some* ☐ None of the:

☒ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____.

☐ Copies of the certified copies of the priority documents have been received

in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 11
- ☒ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

1. The examiner acknowledges the cancellation of claims 2 and 3, the amendments to claims 1, 5, 14, 15, 18, 19, and 21, and the addition of claim 22 filed in Paper No. 10 on Feb. 24, 2003. The examiner also acknowledges the amendment to claim 18 filed in Paper No. 12 on Apr. 25, 2003. Claims 1 and 4-22 are pending.

2. The references, US Patent No. 5,043,239, US Patent No. 5,015,676, and German Patent DE 39-33-166, listed on the form PTO-1449 filed in Paper No. 11 on Feb. 24, 2003, have been crossed-out by the examiner because the references are already of record and have been considered. See the forms PTO-1449 filed in Paper No. 2 on Dec. 26, 2000, and in Paper No. 3 on Mar. 5, 2001.

3. Applicants, in Paper No. 10, pages 11-12, disagree with the examiner's interpretation that claims 1, 14, 15, and 21, filed in Paper No. 8 on Sep. 11, 2002, exclude the presence of alkali metal cations in the structured silicates salts, as set forth in the last office action mailed Nov. 22, 2002, Paper No. 9, paragraph 2. Applicants assert that "[i]t is chemically impossible to make silicates completely free of alkali metals. At least traces are always present. The invention, in one aspect, lies in the presence of low molecular weight organic cations, other cations may be present as well." Applicants further urge that "in distearyldimethyl ammonium bentonite, most

of the sodium cations are replaced by distearyldimethyl ammonium cations. For this reason, it is believed that the ultimate elected species remains within the scope of the claims, as amended by this Amendment [Paper No. 10]."

Contrary to applicants' statements in Paper No. 10, instant claims 1, 14, 18, and 21, as amended in Paper Nos. 10 and 12, limit the cation of the structured silicates to be only a low molecular weight organic cation. Instant claim 1, as amended in Paper No. 10 recites a "structured silicate salt in which the cation is a low molecular weight organic cation" (emphasis added). Instant claims 14 and 21, as amended in Paper No. 10, recite "at least one salt of ionic structured silicates in which the cation is a low molecular weight organic cation" (emphasis added). Instant claim 18, as amended in Paper No. 12, recites a "salt structured silicate in which the cation is a low molecular weight organic cation" (emphasis added). The claim language "cation is a low molecular weight organic cation" excludes any other cation not recited in the claims.

4. Applicants' election of species without traverse in Paper No. 6 has been noted. The examiner has previously acknowledged the elected species, an electrophotographic toner or developer, and the elected ultimate species of invention, distearyldimethyl ammonium bentonite in preparation example 1 on pages 30-31 of the

instant specification. Applicants indicated that originally filed claims 1-6, 9, 10, 14, and 15 read on the ultimate elected species.

However, pursuant to the amendments to claims 1, 14, 18, and 21, filed in Paper Nos. 10 and 12, and for the reasons set forth in paragraph 3, supra, only instant claims 19 and 22 read on the ultimate elected species. Applicants' elected salt, distearyldimethyl ammonium bentonite, appears to be outside the scope of instant claims 1, 14, 18, and 21. As discussed in the last office action in Paper No. 9, paragraph 3, bentonite is identified as sodium montmorillonite. See Grant & Hackh's Chemical Dictionary, fifth ed., page 71. The instant specification at page 8, line 2, identifies montmorillonite as $\text{Na}_{0.33}\{(\text{Al}_{1.67}\text{Mg}_{0.33})(\text{OH})_2[\text{Si}_4\text{O}_{10}]\}$. As applicants admit, the present record shows that the elected salt, quaternary ammonium bentonite, contains some residual sodium ions (i.e., cations). These sodium ions remove the elected species from the scope of the instant claims.

Claims 1, 4-18, 20, and 21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 6.

5. The indicated allowability of the elected ultimate species, an electrophotographic toner or developer comprising a binder and the salt distearyldimethyl ammonium bentonite, is withdrawn in view of the newly discovered reference to the Japanese Patent Office machine assisted translation of JP 8-6295. Rejections of claims 19 and 22 based on the newly cited reference are set forth infra.

6. The objection to the specification set forth in the office action mailed Nov. 22, 2002, Paper No. 9, paragraph 7, item (2), has been withdrawn in response to the replacement paragraphs beginning at page 27, line 17, page 28, lines 4 and 26, page 29, line 30, page 31, line 15, page 40, line 1, page 41, line 6, and the table at page 37, of the specification, filed in Paper No. 10.

The rejections of claims 1-11 and 16-18 under 35 U.S.C. 112, second paragraph, and under 35 U.S.C. 101, set forth in Paper No. 9, paragraphs 9 and 14, respectively, have been withdrawn in response to the amendments to claims 1, 5, 18, and 21, and the cancellation of claims 2 and 3.

The rejections of claims 1-11, 16-19, and 21 under 35 U.S.C. 112, first paragraph, set forth in Paper No. 9, paragraph 11, have been withdrawn in response to the amendments to claims 1, 18, 19, and 21.

The objections to claims 1, 5, 14, 15, and 21, set forth in Paper No. 9, paragraph 12, have been withdrawn in response to the amendments to claims 1, 5, 14, 15, and 21.

(Note that amendment to claim 5 filed in Paper No. 10 introduced a new typographic error in the phrase "phenyl, naphthyl, or heteroaryl[l];" (emphasis added); the clean copy of the claims should not contain editorial directions.)

The rejection of claims 1-11, 16-18, and 21 under 35 U.S.C. 102(b) over US 4,808,849 (Inculet), set forth in Paper No. 9, paragraph 13, has been withdrawn in response to the amendments to claims 1, 18, and 21, reciting the limitation that "the cation is a low molecular weight organic cation." Inculet does not teach or suggest an electret material comprising a structured silicate salt where the cation is a low molecular weight organic cation as recited in the instant claims.

The rejection of claim 18 under 35 U.S.C. 102(b) over US 4,404,270 (Higashida), set forth in Paper No. 9, paragraph 14, has been withdrawn in response to the amendments to claim 18, described supra. Higashida does not teach or suggest a toner comprising a structured silicate salt where the cation is a low molecular weight organic cation as recited in the instant claims.

The rejection of claims 1-11, 14-18, 20, and 21 under 35 U.S.C. 102(b) over Japanese Patent 55-166652 (JP'652), as evidenced by the Japanese Patent Office (JPO) English-abstract of

JP'652, American Chemical Society (ACS) file registry no. 1332-58-7, and Grant & Hackh's Chemical Dictionary, fifth ed., page 321, set forth in Paper No. 9, paragraph 15, has been withdrawn in response to the amendments to claims 1, 14, 18, and 21, as discussed supra. None of the cited references teach or suggest a toner comprising a structured silicate salt where the cation is a low molecular weight organic cation as recited in the instant claims.

7. The disclosure is objected to because of the following informalities:

The typographic error "[^α]" appears in the chemical moiety "-SO₃[^α]" disclosed at line 2 of the replacement paragraph beginning at page 13, line 11, of specification, filed in Paper No. 10.

Appropriate correction is required.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and

distinctly claim the subject matter which applicant regards as the invention.

Claim 22 recites a "method of imparting, controlling or improving the charge of an electrophotographic toner or developer, or an electret material comprising the step of adding a distearyldimethyl ammonium bentonite to a binder of an electrophotographic toner or developer or of a powder coating or of an electret" (emphasis added) for lack of antecedent basis in claim 22. Claim 22 does not previously recite a method of imparting, controlling or improving the charge of "a powder coating." It is not clear whether applicants intend for the claimed method to include treating a powder coating.

10. In light of the rejection of claim 22 under 35 U.S.C. 112, second paragraph, the examiner has interpreted the claim language in claim 22 to recite the step of adding a distearyldimethyl ammonium bentonite to a binder of which a powder coating is comprised. A rejection based on the examiner's interpretation is set forth infra.

11. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

12. Claim 22 is rejected under 35 U.S.C. 102(b) as being anticipated by US 5,807,629 (Elspass), as evidenced by US 5,385,776 (Maxfield).

Elspass discloses a dried powder comprising 72 wt% of a styrene-butadiene rubber binder resin and 28 wt% of a layered material, BENTONE-34, a dialkylammonium montmorillonite, sold by Rheox, Inc. See example 1 at cols. 3 and 4. (The weight percentages are determined from the data in Example 1). Elspass adds BENTONE-34 to the binder resin dissolved in a solvent. Maxfield identifies BENTONE-34 as a montmorillonite whose native interlayer cations were ion-exchanged for dimethyldioctadecylammonium cation. Maxfield, col. 13, line 34, to col. 14, line 3. The addition of BENTONE-34 meets the limitation of "adding a distearyldimethyl ammonium bentonite," as recited in instant claim 22.

Elspass does not disclose that the addition of BENTONE-34 imparts, controls, or improves the charge of the powder as recited in instant claim 22. However, as discussed above, BENTONE-34 meets the limitation of a distearyldimethyl ammonium bentonite recited in instant claim 22. Accordingly, it is reasonable to presume that Elspass's addition of BENTONE-34 has the effects recited in instant claim 22. The burden is on applicants to prove otherwise. In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

(Note that this rejection was previously presented in the first office on the merits mailed on May 1, 2002, Paper No. 7, paragraph 11, applied to originally filed claims 1-6, 9, 10, and 14, and was withdrawn in the office action mailed Nov. 22, 2002, Paper No. 9, paragraph 4. The addition of claim 22 filed in Paper No. 10 reinstated the rejection.)

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 8-6295 (JP'295) combined with US 3,925,278 (Murai), US 4,992,262 (Nakagaki), and Maxfield. See the Japanese Patent Office (JPO) machine-assisted translation of JP'295 for cites.

JP'295 discloses a charge control agent comprising a composition that comprises the quaternary ammonium salt compound (1) of Table 1 of JP'295 and organic bentonite in a weight ratio of 50:50. Translation, Table 1 at page 6, line 1; and paragraph 0052, charge control agent constituent 4. JP'295

adds the charge control agent to a binder resin of a toner. See the JPO translation, paragraph 0054. The resultant toner comprises a binder resin and the charge control agent comprising organic bentonite. JP'295 discloses that the resultant toner shows stable electrostatic charge performances under conditions of high-humidity and high-temperature, as well as under low-humidity and low temperature. See the translation, Table 2, paragraph 0060, lines 1-4, and paragraph 0061. Thus, the addition of JP'295's charge control agent imparts, controls, or improves the charge of an electrophotographic toner and developer as recited in instant claim 22.

JP'295 does not identify the organic bentonite as distearyldimethyl ammonium bentonite as recited in instant claims 19 and 22. However, the term "organic bentonite" is usually defined as a bentonite impregnated with a cationic organic compound, such as a quaternary ammonium salt, e.g., dimethyloctadecylammonium bentonite. Murai, col. 1, lines 35-38. Nakagaki discloses that commercially available organic bentonites include BENTONE 27, BENTONE 34, and BENTONE 38. Nakagaki, col. 3, lines 27-29. Maxfield identifies BENTONE-34 as a montmorillonite whose native interlayer cations were ion-exchanged for dimethyldioctadecyl-ammonium cation. Maxfield, col. 13, line 34, to col. 14, line 3. BENTONE-34 is within the

limitation of "distearyldimethyl ammonium bentonite" as recited in instant claims 19 and 22.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Murai, Nakagaki, and Maxfield, to use the readily commercially available BENTONE 34 as the organic bentonite in the toner disclosed by JP'295, because that person would have had a reasonable expectation of successfully obtaining an electrophotographic toner having stable electrostatic charge performances under conditions of high-humidity and high-temperature, as well as under low-humidity and low temperature, as taught by JP'295.

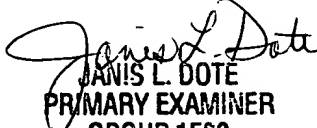
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (703) 308-3625. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (703) 308-2464. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9311 (Rightfax) for after final faxes, and (703) 872-9310 for other official faxes.

Any inquiry of papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Palestine Jenkins, whose telephone number is (703) 308-3521.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

JLD
June 28, 2003


JANIS L. DOTE
PRIMARY EXAMINER
GROUP 1500
1700